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The relationship of selected educational, economic, and social characteristics to the degree of voluntary desegregation was determined in an effort to examine social climate and its role in creating a setting for desegregation in the public schools of Kentucky from the time of the Brown Decision of 1954 to the enactment of the Civil Rights Act of 1964. The Pearson Product-Moment Coefficient of Correlation procedure was used in the analysis of data gathered from census tapes. material prepared by the Kentucky State Department of Public Instruction was employed to calculate the degree of voluntary desegregation. The findings indicated the importance of 4 factors: (1) proportion of the population that was Negro; (2) rurality of the district; (3) the occupational distribution within the Negro community, and (4) the number of employed who work outside the county of residence. It was recommended that the relationship of financial support to percent of non-white public school students, and the importance of the variable of number employed who work outside the county of residence, be further investigated. (SW)

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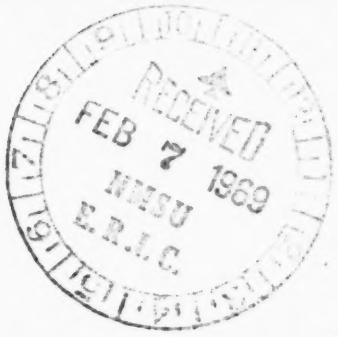

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THE RELATIONSHIP OF EDUCATIONAL, ECONOMIC AND SOCIAL CHARACTERISTICS TO THE DEGREE OF DESEGREGATION IN THE PUBLIC SCHOOLS OF KENTUCKY

Principal Investigator: J. Frank Yeager

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CHAPTER I

INTRODUCTION TO THE STUDY

Desegregation of the public schools within the seventeen border and southern states which includes the state of Kentucky, that historically operated a dual school system based upon race, has proven to be an arduous and complex task. Three specific problem areas of school desegregation can be identified for possible investigation. These include the social climate from the time of the Brown Decision of 1954 to the enactment of the Civil Rights Act of 1964, the leadership qualities of school administrators that have successfully desegregated a school district, and the degree of influence of the United States Office of Education Guidelines, developed as a result of the Civil Rights Act of 1964, upon the removal of the dual school system of education.

The study herein reported was limited to the investigation of the first problem area. This study was designed to examine social climate by determining the relationship of selected social climate variables to the degree of voluntary desegregation in the public schools of Kentucky prior to the Civil Rights Act of 1964.

Historical background. Desegregation to eliminate the dual school system in Kentucky began June 6, 1955, when a Negro girl entered a summer school in the Fayette County School District. By October, 1955, thirty other districts had voluntarily desegregated. Voluntary and peaceful desegregation of all grades in the Louisville Independent School Districts in September, 1956, won national and

international recognition for the school district and for Superintendent Omer Carmichael. These smooth and peaceful transitions in these schools set the stage for Kentucky to move faster than most other southern and border states in desegregation.

The Kentucky State Board of Education as early as June of 1955 urged desegregation as soon as possible. Formal desegregation plans were advocated by the State Board of Education by August, 1962. Governors of Kentucky during this period publicly advised citizens to abide by the law and civil disorder was not tolerated. The Day Law which required racial segregation was amended to comply with decisions of the Supreme Court.

Federal court precedents in Kentucky have influenced local districts to avoid the use of the so called "freedom of choice" type of desegregation plan. Kentucky schools have used for the most part new geographic attendance zones. Many of the former all Negro schools have been closed and new geographic attendance zones formed.

Table I provides a concise and comprehensive picture of the progress toward desegregation which occurred from 1955 to 1964. Beginning from complete racial segregation in 1954-1955 this table indicates the progress made in both student and faculty desegregation.

<u>The topic under study</u>. Progress made in Kentucky in the removal of the dual school system provides an excellent subject for study. During the period from

the 1955-1956 school year when desegregation started in Kentucky after the Brown Decision through the 1963-1964 school year, which was the last school year not affected by Federal civil rights legislation, it appears that Kentucky made considerable progress in removing the dual school system and promoting voluntary desegregation. Progress during this period was experienced without the influence of the United States Office of Education Guidelines developed as a result of the Civil Rights Act of 1964. It can therefore be assumed that identifiable factors other than outside stimulants accounted for most of the progress made by the school districts in Kentucky. It can be further assumed that the school districts partially adapted to the social change demanded by the Supreme Court decision in the Brown Case of 1954 which, after its completion in 1955, ruled that the separate but equal theory used to maintain the dual school school system was unconstitutional.

In the study, selected educational, economic, and social characteristics of selected school districts of Kentucky which had a bi-racial student population were examined in relation to the degree of voluntary desegregation. The dependent variable (hereafter termed the criterion variable), the degree of voluntary desegregation, was computed for the 1963-1964 school year.

Definition of terms used. Two terms should be defined. By "social climate" is meant the complex set of educational, economic, and social variables which are involved in the creation of a favorable or unfavorable setting for the desegregation of public schools. In this study forty-four variables have been identified as possibly being part of the social climate.

TABLE I

THE DESEGREGATION OF SCHOOL DISTRICTS, SCHOOLS, STUDENT POPULATION AND TEACHERS IN KENTUCKY FROM 1955 THROUGH 1964

School* Year	No. of School Districts	No. of Districts with Negro & White Pupils	No. of Districts With Desegregated Student Bodies	No. of Schools In Desegregated Districts	No. of Schools Desegregated In Desegregated Districts	No. of White Pupils In Desegregated Schools	No. of Negro Pupils In Desegregated Schools	White Teachers In Desegregated Schools	Negro Teachers In Desegregated Schools
1955-56	224	184	30	826	41	16,688	313	639	2
1956-57	221	177	91	1,742	233	120,307	8,017	4,708	113
1957-58	216	170	94	1,736	262	133,182	10,897	5,475	172
1958-59	215	175	105	1,730	331	149,392	11,492	5,915	138
1959-60	212	173	106	1,658	377	165,645	16,329	6,808	287
1961-62	211	173	119	1,980	405	200,581	22,021	7,917	382
1962-63	206	169	126	1,837	467	221,402	24,346	9,154	433
1963-64	204	167	155	1,956	625	287,990	29,792	12,045	507

(*Data not available for 1960-61)

The phase "degree of voluntary desegregation" refers to the percentage of non-white students within a given school district that were assigned to schools for the 1963-1964 school year by means other than race. A geographical attendance zone that produces an all-Negro or all-white student body is considered as legally desegregated if the faculty at the school was desegregated. This type of school was considered desegregated for purposes of this study. Only six schools in three school districts were considered to be legally desegregated although they had no actual mixing of the races.

School districts included within the study. Included in this study were one hundred and forty-one bi-racial school districts of Kentucky. These districts exhibited varying degrees of voluntary desegregation during the period from the 1955-1956 school year through the 1963-1964 year.

Five school districts with bi-racial student population which had experienced voluntary desegregation were omitted from this study because of a lack of precise information. The districts in this category had experienced consolidation and it was thought that changes caused by this shifting were sufficient for their exclusion. These districts included Butler County, Carrol County, Carrollton Independent, Lincoln County, and Stanford Independent. Excluding also the districts under Court Order, the districts with no bi-racial population, and the districts in smaller communities for which no separate census data were available, the study included the remaining one hundred and forty-one Kentucky school districts. These districts are identified by name and the degree of voluntary desegregation effected by the 1963-1964 school year in Appendix A.

Source of data. Educational, economic, and social characteristics were identified and selected for study by educational consultants and the principal investigator. Data used in this study were obtained from documents of the Kentucky State Department of Public Instruction and from the census tapes of the United States Department of Commerce, Bureau of the Census. The tapes provided descriptive data, including economic and social characteristics, for Kentucky for 1960.

Data used from the Bureau of the Census tape are accumulated for counties and cities of 2,500 or more population. Since boundary lines of independent school districts in Kentucky do not necessarily run coterminous with city boundaries, data for these districts were taken from the data available from state documents or from the Bureau of the Census tape which provided information for the city of which the independent districts are a part. The difference between the actual characteristics of an independent school district and the city in which it is located was not considered to be significant in affecting the total picture. Independent school districts that are in communities smaller than the smallest division in the Bureau of the Census tape were not studied as independent units. It was thought that these small communities would have similar characteristics to the county in which they are located. Consequently, the characteristics of these communities were considered as a part of the county total and the county school district.

The variables which are included in the study are listed in Appendix B. The variables were studied in relation to the degree of voluntary desegregation exhibited in the 1963-1964 school year by the one hundred and forty-one school districts.

Review of the literature. The topic of readiness for desegregation and factors correlated with the pattern of school desegregation have already received some attention in the literature. Johnson (1954) in the presidential address to the Southern Sociological Society emphasized the importance of the value system as shaping possible adjustments in desegregation. Ashmore (1954) described the changes occurring in the South and the factors which are related to the acceptance of change in the educational system. Rubin (1954) discussed the social and cultural change taking place in the "plantation area," with the population "in transition from feudal agrarianism to industrial mass society." Walker (1954) noted the extension of the mass media into the South, the decline of tenant farming, the change in Negro status partly caused by the Second World War, and other factors associated with the establishment of a favorable climate of opinion toward desegregation. Vander Zanden (1959) commented that the South is moving toward an industrial and commercial economy centered about metropolitan centers, thus bringing about a decline in white supremacy values. Cleary (1965) noted the changing economic conditions of the South, including increasing industrialization and urbanization, which should cause gradual desegregation. E. Prothro (1952), in discussing attitude formation toward desegregation, ranked cultural factors as more important than personality dynamics; he stated: ". . .situational, historical, and cultural factors appear to be of considerable, perhaps major, import."

Several researchers have described the factors associated with successful integration of the schools. Shagaloff (1954) compared the peaceful integration of the East St. Louis schools with the resistance which was formed in Cairo, Illinois;

she concluded that the ambiguous position taken by the school authorities in Cairo encouraged violence. Clark (1954) observed that the factors responsible for desegregation varied from situation to situation; he noted that successful desegregation was caused by such factors as voluntary public pressure, the threat of publicity, moral arguments, and the threat of court action. Johnson (1954) called for a show of strong forces, noting that when the city and school officials stood firm on a definite policy, there was little disturbance in the transition. Dodson (1962) called for "clearly defined policy" and "mandates which are unequivocal."

Besides describing the general cultural setting favorable to integration and the structure of the specific setting facilitating peaceful desegregation, scholars have catalogued the ecological variables associated with the conditions of lynching, lack of Negro registration for voting, and segregation in schooling. According to the Commission on the Study of Lynching (1931), Raper (1933), and Pettigrew and Cramer (1959), while the vast number of lynchings in absolute terms have occurred in the state of Mississippi and many of the Black Belt counties throughout the South, actually the counties with low proportions of Negroes experienced the highest lynching rates. Counties exhibiting stability experienced low lynching rates.

Matthews and Prothro (1963) reported characteristics associated with Negro voting registration in southern counties. Independent variables negatively associated with registration included the proportion of the population in 1960 that was Negro, the proportion that was Negro in 1900, the per cent of the labor force in agricultural employment (a measurement of rurality), and the increase in white median school years (except for the highest level). Acting as an independent variable which was

positively associated with registration was the per cent of the non-white labor force in white collar occupations. Two intervening variables that were positively associated with registration were median non-white education and median non-white income. An intervening variable inversely associated with registration was the per cent of the white population having church membership. The three intervening variables were not correlated with registration when the independent variable of the proportion of Negroes in the population in 1960 was controlled. Industrialization or urbanization were not correlated with registration, either as independent or intervening variables.

Several writers have commented on factors associated with desegregation of the schools. Johnson (1954) and A. L. Coleman (1956) identified the low ratio of Negro population as favorable for desegregation. Graham (1955) called attention to urbanism as a positive factor. Ogburn and Grigg (1956) noted that attitudes favoring segregation were found in counties having a high proportion of Negroes and in counties in which Negroes exhibit lower levels of education. Tumin (1958) observed that whites with little education are more resistant to desegregation.

The most important research concerning correlates of desegregation has been done by Pettigrew. From a survey conducted in 1955 he reported (1957) that whites in favor of maintaining segregation score higher in authoritarianism and intolerance and reside in communities having populations with high proportions of Negroes. One interesting finding was that there were no regional differences in the predictions by whites concerning the eventual acceptance of racial integration. From a study of demographic data for Kentucky and Missouri, Pettigrew (1957)

concluded that urban communiteis would desegregate first, while poor, rural counties with high Negro ratios would desegregate last. From examination of the data collected during the 1955 survey, Pettigrew (1959) reported that personality differences are of equal importance in the North and South in producing anti-Negro prejudice, but that "sociocultural and social adjustment factors are considerably more important in the South and account for the sharp differences in the regions." From an examination of demographic data for the states of Texas, Oklahoma, Missouri, Kentucky, and West Virginia, Pettigrew and Cramer (1959) concluded that high urban-low Negro ratio counties tended to integrate the earliest and that low urban-high Negro ratio counties tended to integrate last. Low urban counties had fewer women in the labor force and fewer workers in non-traditional manufacturing jobs. Pettigrew and Cramer concluded that the states should be analyzed separately in terms of desegregation factors because of the fact that the states differ widely in their demographic characteristics. Pettigrew (1965) identified the following additional factors as associated with desegregation: urban, differentiated communiteis would be most tolerant toward integration; southern areas with greater violence and with school segregation laws have been most opposed to integration; and metropolitan areas with a high percentage of Negroes occupying white-collar jobs (thus providing leadership more insistent upon integration) provide a more favorable climate for desegregation. Pettigrew concluded that residential patterns will be the strongest anti-integration force.

From the findings of previous research as reported in the literature it would appear that three variables especially should be associated with desegregation

of the public schools. These three variables are: the proportion of the population that is Negro, the rurality of the school district, and the Negro occupational level. A social climate favorable to desegregation would have a low proportion of the county population that is Negro, would not be rural, and would have a sufficient percentage of Negroes in the community with white-collar occupations or high incomes so as to provide leadership for integration.

Procedures of the study. This study examined the relationship of selected educational, economic, and social variables of selected Kentucky school districts to the degree of voluntary desegregation experienced during the 1955-1956 through 1963-1964 period. The degree of desegregation exhibited by 196[illegible] 1964 was used as the dependent variable. The basic procedures for this study were outlined as follow: (1) Social climate variables were identified; (2) Data were gathered from census tapes and from material prepared by the Kentucky State Department of Public Instruction; (3) The degree of voluntary desegregation was calculated from data made available by the Kentucky State Department of Public Instruction; (4) Relationships between the degree of voluntary desegregation exhibited during 1963-1964 and the various selected variables were determined by the use of the Pearson Product-Moment Coefficient of Correlation procedure, with significance established at the .05 level of confidence; and (5) Data were examined for possible factor analysis.

CHAPTER II

FINDINGS AND CONCLUSIONS

In the selection of the social-climate variables, a pilot study was conducted using sixty-seven educational, economic and social variables. From the results of this pilot study, forty-four variables were identified as promising for further investigation. Empirical data representing these variables came from the Bureau of the Census tapes for 1960 and selected state publications. The forty-four social-climate variables and the criterion variable are listed in Appendix B.

From data furnished by the Kentucky State Department of Public Instruction in "Kentucky State Department of Education Report of Eight Years Progress," November, 1963, the criterion variable, the degree of voluntary desegregation, was computed for the selected school districts. The degree of voluntary desegregation ranged from 0 to 100 per cent. The school districts studied, together with the degrees of voluntary desegregation achieved, are listed in Appendix A.

Statistical techniques. The Pearson product-moment coefficient of coefficient of correlation was employed to determine existing relationships. Additional statistical treatment was applied to the data in an attempt to cluster independent social-climate variables. Through inspection of the correlations only one cluster was identified; this cluster will be reported later in the report. Factor analysis of the data was considered. Since factor analysis requires a somewhat normal distribution and since the histograms of the distributions for the social-climate variables revealed radically non-normal distributions, it was decided that

the use of the factor analysis technique would not be appropriate in the study.

Treatment of the data. Data were treated in two separate groups. Group One contains data for all selected one hundred and forty-one school districts. For Group Two, data includes selected one hundred and thirty-five school districts, which excludes the six largest districts in Kentucky which lie within communities defined in the Census Reports for Kentucky as having populations of 60, 000 or more. These groupings were determined when all one hundred and forty-one school districts including small, average, and large districts were treated as one group. The coefficients of correlation were adversely affected because the six larger school districts by total population exceeded five standard deviations from the means of the total group.

The findings for Group One. Within Group One, the .05 level of confidence is reached at the coefficient of correlation of .164. Within this same group, the .01 level is reached at the coefficient of correlation of .215. Three social-climate variables are at or beyond the .05 level for Group One. Two of the variables are at the .01 level. Appendix C contains the matrix of correlations and inter-correlations for Group One. Those variables which were significantly correlated with the criterion variable are listed in Table II.

The findings for Group Two. Within Group Two, the .05 level of confidence is reached at the coefficient of correlation of .168. The .01 level is reached at the coefficient of correlation of .220. Eleven social-climate variables are at or beyond the .05 level of confidence for the Group Two school districts. Eight variables

are at the .01 level in this group. The Group Two matrix of correlations and inter-correlations is found in Appendix C. The variables which were significantly correlated with the criterion variable for the Group Two school districts are listed in Table III.

Discussions of the findings and conclusions. When all of the school districts under study were considered (Group One), three variables were related to the degree of voluntary desegregation. Inversely correlated with the degree of voluntary desegregation was the percentage of the public school students who were non-white and the number of non-white workers who were employed in agriculture, forestry, and fisheries. Positively correlated was the median non-white family income. These three variables generally correspond to the three factors predicted to be related to desegregation--the proportion of the population that is Negro, the rurality of the school district, and the Negro occupational level. The correlations were in the directions expected.

For Group Two, social-climate variable number eight, the percent of non-white public school students, has the strongest correlation to the criterion variable. Social-climate variables numbers nine, ten, fifteen, twenty-five, thirty, thirty-one, thirty-three, and forty also have significant negative correlations (at the .01 level) with the criterion variable. They are also positively inter-correlated to variable number eight at the .01 level. Because of the logical connection between these nine variables, it would seem that this cluster either serves as a single measurement or measures related phenomena. Variable eight, the percent of non-white

TABLE II

SIGNIFICANT RELATIONSHIPS OF GROUP I

Variable	Description	Level of Confidence	Correlation Coefficient
8	Percent of non-white public school students	.01	- .418
33	Number non-white employment in agriculture, foresty and fisheries	.01	- .228
37	Median non-white family income	.05	+ .196

TABLE III

SIGNIFICANT RELATIONSHIPS OF GROUP II

Variable	Description	Level of Confidence	Correlation Coefficient
8	Percent of non-white public school students	.01	- .441
9	Number non-white elementary school enrollment, grades 1 through 8	.01	- .293
40	Number home ownership, occupied by non-white owner	.01	- .292
10	Number non-white high school enrollment, grades 9 through 12	.01	- .288
15	Number non-white born in state of residence	.01	- .282
31	Number non-white female employed in professional, technical, and kindred occupations	.01	- .239
25	Number non-white married couples with own children under 6 years	.01	- .235
33	Number non-white employment in agriculture, forestry and fisheries	.01	- .225
30	Number non-white male employed professional, technical and kindred occupations	.01	- .210
37	Median non-white family income	.05	+ .199
27	Number worked outside county of residence	.05	+ .184

public school students, is most indicative of the content of this cluster as it has the highest correlation with the criterion variable.

For both Groups One and Two, at least three variables are related to the degree of voluntary desegregation. The degree of desegregation is inversely related to the per cent of the public school students that are non-white (this in turn would be related to the per cent of the population that is non-white), and the number of non-white who are employed in basically rural occupations. Positively correlated to the degree of desegregation is the median non-white family income (this in turn would be related to the per cent of non-white employed in white-collar occupations).

Median non-white family income was found to have a positive correlation with the degree of voluntary desegregation. This could mean that the power structure of a given community that has the ability to promote desegregation might have the fear of lowering the educational quality unless the median income for non-white families is high enough to influence the environment of the Negro students, who might otherwise be seen as a negative influence on the school environment. A more likely explanation is that greater Negro leadership is present in those communities evidencing a higher median non-white income. These leaders, who are probably white-collar workers, are more insistent upon integration.

Variable 33, the number of non-white employed in agriculture, foresty, and fisheries, is probably a measurement of both the per cent of the population that is Negro and rurality. Less tolerance is found in the more rural communities.

Consequently, the white supremacy values found in such communities would deter school desegregation.

For the Group Two school districts (with the large population centers excluded), variable 27--the number who work outside the county of residence--was found to be significant. This variable has not been previously reported in the literature. It probably can be understood best in the same way that per cent of the population (or of the student population) that is non-white can be understood. If the per cent of the population that is Negro is low, then the presence of Negroes and the process of desegregation are not interpreted as threats to the white community. Similarly, those individuals who work outside of the county of residence are not in competition for their jobs with the residents of the community; the presence of Negroes and desegregation are not as likely to be interpreted in the terms of economic threat since the whites are not dependent upon the community for their jobs.

Variable eight, the percentage of non-white public school students, which was inter-related to eight other variables related to the criterion variable, as already noted can be best understood in terms of threat perceived by whites. A negative image caused by mass stereotyping of Negroes would be magnified if the Negro percentage is high. This variable has a prominent role in the desegregation process. The psychological threat of the possibility of being in numerical minority is a factor which seems to threaten the power structure and the white community as a whole. It would appear that it has prevented many communities from taking positive steps toward the elimination of the dual school system of education

Existing research such as the Coleman Report and the more recent Report of the United States Commission on Civil Rights indicates that isolationism and particularly racial segregation limit the quality of education. This research also indicates that if students are taken out of isolation and placed in situation in which there exists the proper climate for learning, the minority group students will gain in achievement, while at the same time the majority group student will not be adversely affected. These findings should help break down the mass stereotyping of Negroes and adverse attitudes toward desegregation.

Recommendations. Several areas can be identified for additional research. From an examination of the inter-correlations of variables eight (percent of non-white public school students), forty-two, forty-three, and forty-four, it would appear that there is stronger financial support for public education (as measured by the local effort index and the local initiative index) when the percent of non-white public school students is higher, regardless of local ability. This relationship deserves further investigation.

As noted in this report, the findings supported previous research which indicated the importance of three factors--proportion of the population that is Negro, rurality, and the occupational distribution within the Negro community (in this case, as measured by median non-white income). Not previously reported is the importance of the variable of number of employed who work outside the county of residence. Additional research concerning this variable might give added insight into the desegregation process.

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APPENDICES

APPENDIX A

LIST OF SCHOOLS STUDIED

APPENDIX A

LIST OF SCHOOLS STUDIED:

SCHOOL DISTRICTS AND DEGREE OF DESEGREGATION ACHIEVED

1.	Adair County	84%
2.	Allen County	100%
3.	Anderson County	19%
4.	Ballard County	40%
5.	Barren County	65%
6.	Bath County	100%
7.	Bell County	100%
8.	Boone County	100%
9.	Bourbon County	100%
10.	Boyle County	38%
11.	Bracken County	100%
12.	Breathitt County	100%
13.	Breckinridge County	100%
14.	Bullitt County	100%
15.	Caldwell County	19%
16.	Calloway County	0%
17.	Carlisle County	100%
18.	Carter County	100%
19.	Casey County	100%

20.	Christian County	2%
21.	Clark County	100%
22.	Clay County	19%
23.	Clinton County	100%
24.	Crittenden County	46%
25.	Cumberland County	16%
26.	Daviess County	100%
27.	Edmonson County	100%
28.	Fayette County	64%
29.	Fleming County	100%
30.	Floyd County	33%
31.	Franklin County	100%
32.	Fulton County	0%
33.	Gallatin County	37%
34.	Garrard County	0%
35.	Grant County	100%
36.	Graves County	0%
37.	Green County	25%
38.	Hancock County	100%
39.	Hardin County	100%
40.	Harlan County	96%
41.	Harrison County	100%
42.	Hart County	20%

43.	Henderson County	22%
44.	Henry County	100%
45.	Hickman County	16%
46.	Jefferson County	100%
47.	Jessamine County	100%
48.	Kenton County	100%
49.	Knott County	100%
50.	Knox County	39%
51.	LaRue County	54%
52.	Laurel County	18%
53.	Lawrence County	100%
54.	Lee County	6%
55.	Letcher County	4%
56.	Lewis County	100%
57.	Livingston County	33%
58.	Logan County	22%
59.	Lyon County	100%
60.	Madison County	100%
61.	Marion County	67%
62.	Mason County	100%
63.	McCracken County	22%
64.	McLean County	100%
65.	Meade County	100%
66.	Mercer County	100%

67.	Metcalfe County	5%
68.	Monreo County	35%
69.	Morgan County	100%
70.	Muhlenberg County	1%
71.	Nelson County	33%
72.	Nicholas County	100%
73.	Ohio County	19%
74.	Oldham County	100%
75.	Owen County	100%
76.	Pendleton County	100%
77.	Perry County	100%
78.	Pike County	70%
79.	Powell County	100%
80.	Pulaski County	20%
81.	Robertson County	100%
82.	Rowan County	100%
83.	Russell County	57%
84.	Scott County	100%
85.	Shelby County	0%
86.	Simpson County	5%
87.	Spencer County	22%
88.	Taylor County	100%
89.	Todd County	14%
90.	Trigg County	16%

91.	Warren County	100%
92.	Washington County	75%
93.	Wayne County	100%
94.	Webster County	100%
95.	Woodford County	100%
96.	Ashland Independent	100%
97.	Barbourville Independent	100%
98.	Bardstown Independent	100%
99.	Berea Independent	100%
100.	Campbellville Independent	20%
101.	Central City Independent	44%
102.	Covington Independent	34%
103.	Danville Independent	5%
104.	Earlington Independent	0%
105.	Elizabethtown Independent	100%
106.	Erlanger-Elsmere Independent	100%
107.	Falmouth Independent	100%
108.	Frankfort Independent	100%
109.	Fulton Independent	21%
110.	Georgetown Independent	100%
111.	Glasgow Independent	0%
112.	Greenville Independent	23%
113.	Harlan Independent	18%
114.	Harrodsburg Independent	100%

115.	Hazard Independent	86%
116.	Henderson Independent	54%
117.	Hopkinsville Independent	4%
118.	Irvine Independent	100%
119.	Jenkins Independent	0%
120.	Leitchfield Independent	100%
121.	Lexington Independent	4%
122.	London Independent	100%
123.	Louisville Independent	100%
124.	Lynch Independent	21%
125.	Maysville Independent	100%
126.	Middlesboro Independent	26%
127.	Monticello Independent	100%
128.	Mt. Sterling Independent	0%
129.	Murray Independent	29%
130.	Newport Independent	100%
131.	Owensboro Independent	57%
132.	Paducah Independent	14%
133.	Paris Independent	22%
134.	Pikeville Independent	15%
135.	Pineville Independent	100%
136.	Providence Independent	20%
137.	Russellville Independent	19%
138.	Scottsville Independent	100%

139.	Shelbyville Independent	29%
140.	Somerset Independent	29%
141.	Williamsburg Independent	100%

APPENDIX B

SOCIAL-CLIMATE VARIABLES

APPENDIX B

45. CRITERION VARIABLE: That percentage of non-white students, within a given school district, that were voluntarily assigned to schools for the school year 1963-64, by means other than race.

EDUCATIONAL VARIABLES:

1. Number of disadvantaged youth in schools, with family income under $2,000 per year.
2. Persons 25 years old and over, median school years completed.
3. Non-white persons, 25 years old and over, median school years completed.
4. Male, 25 years old and over, median school years completed.
5. Female, 25 years old and over, median school years completed.
6. Number of public elementary school enrollment, grades 1 through 8.
7. Number of public high school enrollment, grades 9 through 12.
8. Percent of non-white public school students.
9. Number of non-white elementary school enrollment, grades 1 through 8.
10. Number non-white high school enrollment, grades 9 through 12.
11. Number students non-public school.

SOCIAL VARIABLES:

12. Number total population
13. Number non-white population.
14. Number born in state of residence.
15. Number non-white born in state of residence.
16. Number born in different state.
17. Number non-white born in different state.
18. Number residence not changed between 1955 and 1960.
19. Number residence changed, but subjects still living in U.S.
20. Number residence changed, but subjects still living in same county.
21. Number residence change, but subjects living in different county in same state.
22. Number always lived in same residence.
23. Number married couples with own children under 6 years.
24. Number of families.
25. Number non-white married couples with own children under 6 years.

ECONOMIC VARIABLES:

26. Number worked in county of residence.
27. Number worked outside county of residence.
28. Number male employed in professional, technical, and kindred occupations.

29. Number female employed in professional, technical, and kindred occupations.

30. Number non-white male employed in professional, technical and kindred occupations.

31. Number non-white female employed in professional, technical, and kindred occupations.

32. Number employed in agriculture, forestry, and fisheries.

33. Number non-white employment in agriculture, forestry, and fisheries.

34. Number male, experienced, unemployed.

35. Number female, experienced, unemployed.

36. Median family income.

37. Median non-white family income.

38. Number of housing units.

39. Number home ownership, occupied by white owner.

40. Number home ownership, occupied by non-white owner.

SPECIAL VARIABLES:

41. Current expenditure per pupil.

42. Local effort index (amount of money that is locally raised, divided by Average Daily Attendance).

43. Local initiative index (amount of tax rate which is below or above the required tax rate of Kentucky's Minimum Foundation Program).

44. Local ability index (equalized assessed evaluation of non-exempted taxable property; divided by the number of students in local unit).

APPENDIX C

MATRICES

CORRELATION MATRIX FOR GROUP I

(Elements expressed in hundreds of a unit, off diagonal elements which round to 100 expressed as "XX".)

	1	2	3	4	5	6	7	8	9	10	11	12
1		-31	-18	-31	-32	73	71	-07	50	50	44	62
2	-31		46	98	98	12	14	20	13	12	23	18
3	-18	46		45	46	07	07	09	11	11	14	12
4	-31	98	45		93	10	12	15	11	10	21	16
5	-32	98	46	93		11	13	25	13	13	23	17
6	73	12	07	10	11		99	09	79	77	89	97
7	71	14	07	12	13	99		12	82	81	90	98
8	-07	20	09	15	25	09	12		40	42	17	18
9	50	13	11	11	13	79	82	40		99	85	89
10	50	12	11	10	13	77	81	42	99		82	87
11	44	23	14	21	23	89	90	17	85	82		96
12	62	18	12	16	17	97	98	18	89	87	96	
13	53	12	12	10	13	80	83	37	99	99	84	90
14	65	14	09	12	14	97	98	16	89	87	95	XX
15	49	13	11	11	14	77	81	41	XX	99	83	88
16	47	30	20	28	28	89	91	21	83	80	90	94
17	51	13	13	12	12	77	82	34	97	97	82	88
18	68	11	06	09	11	96	97	16	90	88	94	99
19	36	31	26	31	28	72	73	14	60	58	66	75
20	59	17	10	15	17	96	97	19	89	87	97	99
21	38	35	25	31	36	82	82	20	75	74	81	86
22	83	-04	-01	-05	-04	95	95	07	80	78	84	93
23	58	21	12	19	21	98	97	15	83	81	96	99
24	60	18	11	16	18	96	97	19	90	88	96	XX
25	50	13	12	11	14	79	83	38	XX	99	85	90
26	54	21	15	19	21	93	94	23	92	90	94	99
27	12	20	14	19	20	35	35	-07	22	21	44	39
28	46	31	16	28	32	92	92	21	84	82	95	96
29	54	25	14	22	25	93	94	24	92	90	96	99
30	47	18	14	15	18	75	78	43	98	98	80	86
31	49	13	12	11	14	78	81	38	99	98	85	89
32	06	-28	-20	-31	-26	07	06	-19	-01	-03	-00	05
33	03	01	-06	-03	03	12	11	37	19	18	06	13
34	75	05	04	04	05	93	95	17	90	89	86	95
35	51	18	13	16	18	86	89	30	97	96	91	95
36	-29	79	45	75	81	19	21	30	20	20	36	26
37	11	24	40	22	25	25	25	10	16	16	23	24
38	58	08	08	07	07	80	84	25	96	96	84	89
39	59	08	08	07	08	83	86	23	96	95	87	91
40	49	10	10	08	11	74	78	39	99	99	80	85
41	-17	21	11	17	26	13	15	17	22	21	26	20
42	-26	51	31	46	57	16	18	28	26	26	37	26
43	-15	42	16	39	43	11	12	37	16	17	21	16
44	-28	39	27	35	44	06	08	17	17	16	25	15
45	00	06	12	06	05	08	07	-42	01	-01	12	08

	13	14	15	16	17	18	19	20	21	22	23	24
1	53	65	49	47	51	68	36	59	38	83	58	60
2	12	14	13	30	13	11	31	17	35	-04	21	18
3	12	09	11	20	13	06	26	10	25	-01	12	11
4	10	12	11	28	12	09	31	15	31	-05	19	16
5	13	14	14	28	12	11	28	17	36	-04	21	18
6	80	97	77	89	77	96	72	96	82	95	98	96
7	83	98	81	91	82	97	73	97	82	95	97	97
8	37	16	41	21	34	16	14	19	20	07	15	19
9	99	89	XX	83	97	90	60	89	75	80	83	90
10	99	87	99	80	97	88	58	87	74	78	81	88
11	84	95	83	90	82	94	66	97	81	84	96	96
12	90	XX	88	94	88	99	75	99	86	93	99	XX
13		89	99	83	96	90	61	89	77	82	83	90
14	89		88	91	86	XX	70	XX	85	94	99	XX
15	99	88		81	96	89	58	88	76	79	82	89
16	83	91	81		86	90	91	92	85	80	94	93
17	96	86	96	86		88	68	87	70	80	81	88
18	90	XX	89	90	88		67	99	82	96	97	99
19	61	70	58	91	68	67		69	74	60	76	72
20	89	XX	88	92	87	99	69		84	92	99	XX
21	77	85	76	85	70	82	74	84		70	87	86
22	82	94	79	80	80	96	60	92	70		90	92
23	83	99	82	94	81	97	76	99	87	90		99
24	90	XX	89	93	88	99	72	XX	86	92	99	
25	99	89	XX	84	98	90	62	89	75	80	84	90
26	92	97	91	96	91	96	78	98	86	87	97	98
27	27	38	22	39	24	38	30	36	44	37	40	39
28	84	96	83	91	80	93	70	97	90	82	97	96
29	92	98	91	92	89	97	70	99	88	88	97	99
30	98	85	99	79	93	86	57	86	77	75	79	87
31	98	88	99	80	95	89	56	89	74	79	82	90
32	-02	05	-01	04	-03	05	11	02	13	05	06	05
33	18	11	20	19	16	10	25	10	25	07	13	12
34	90	96	89	84	89	97	62	94	74	96	91	95
35	96	94	97	88	94	95	65	95	82	85	90	96
36	21	24	21	35	20	21	29	27	42	06	30	27
37	19	24	16	26	17	22	25	23	29	22	26	23
38	96	89	96	80	96	92	57	89	70	85	83	90
39	96	92	95	82	96	94	57	91	70	88	85	92
40	98	85	99	77	97	87	54	85	70	77	78	86
41	20	20	22	21	19	19	14	21	30	09	21	22
42	27	25	28	27	21	22	17	27	41	08	27	27
43	16	15	16	18	14	13	09	17	22	06	17	17
44	18	14	19	16	13	12	10	16	28	-01	16	16
45	04	08	00	07	03	07	07	09	09	08	09	08

	25	26	27	28	29	30	31	32	33	34	35	36
1	50	54	12	46	54	47	49	06	03	75	51	-29
2	13	21	20	31	25	18	13	-28	01	05	18	79
3	12	15	14	16	14	14	12	-20	-06	04	13	45
4	11	19	19	28	22	15	11	-31	-03	04	16	75
5	14	21	20	32	25	18	14	-26	03	05	18	81
6	79	93	35	92	93	75	78	07	12	93	86	19
7	83	94	35	92	94	78	81	06	11	95	89	21
8	38	23	-07	21	24	43	38	-19	37	17	30	30
9	XX	92	22	84	92	98	99	-01	19	90	97	20
10	99	90	21	82	90	98	98	-03	18	89	96	20
11	85	94	44	95	96	80	85	-00	06	86	91	36
12	90	99	39	96	99	86	89	05	13	95	95	26
13	99	92	27	84	92	98	98	-02	18	90	96	21
14	89	97	38	96	98	85	88	05	11	96	94	24
15	XX	91	22	83	91	99	99	-01	20	89	97	21
16	84	96	39	91	92	79	80	04	19	84	88	35
17	98	91	24	80	89	93	95	-03	16	89	94	20
18	90	96	38	93	97	86	89	05	10	97	95	21
19	62	78	30	70	70	57	56	11	25	62	65	29
20	89	98	36	97	99	86	89	02	10	94	95	27
21	75	86	44	90	88	77	74	13	25	74	82	42
22	80	87	37	82	88	75	79	05	07	96	85	06
23	84	97	40	97	97	79	82	06	13	91	90	30
24	90	98	39	96	99	87	90	05	12	95	96	27
25		92	23	84	92	97	99	-01	19	90	97	20
26	92		29	96	98	88	91	07	17	92	96	27
27	23	29		35	35	24	23	-06	-03	32	32	41
28	84	96	35		98	83	84	01	13	86	91	38
29	92	98	35	98		90	92	-00	12	93	96	32
30	97	88	24	83	90		98	-06	16	86	95	23
31	99	91	23	84	92	98		-05	12	89	97	21
32	-01	07	-06	01	-00	-06	-05		56	-04	-01	-36
33	19	17	-03	13	12	16	12	56		05	13	-04
34	90	92	32	86	93	86	89	-04	05		93	15
35	97	96	32	91	96	95	97	-01	13	93		28
36	20	27	41	38	32	23	21	-36	-04	15	28	
37	17	22	24	25	25	18	17	-19	-12	21	20	39
38	96	90	30	81	90	93	96	-06	06	93	95	17
39	96	91	30	83	92	92	96	-05	04	95	96	18
40	99	88	21	79	88	97	98	-04	14	88	95	18
41	21	22	20	25	22	22	21	21	21	13	24	26
42	26	28	31	36	32	30	26	-06	09	16	31	67
43	16	16	20	24	20	19	16	-30	-02	10	17	49
44	17	18	19	22	19	19	16	07	14	06	21	52
45	02	07	10	09	08	-01	02	-02	-23	07	03	06

	37	38	39	40	41	42	43	44	45
1	11	58	59	49	-17	-26	-15	-28	00
2	24	08	08	10	21	51	42	39	06
3	40	08	08	10	11	31	16	27	12
4	22	07	07	08	17	46	39	35	06
5	25	07	08	11	26	57	43	44	05
6	25	80	83	74	13	16	11	06	08
7	25	84	86	78	15	18	12	08	07
8	10	25	23	39	17	28	37	17	-42
9	16	96	96	99	22	26	16	17	01
10	16	96	95	99	21	26	17	16	-01
11	23	84	87	80	26	37	21	25	12
12	24	89	91	85	20	26	16	15	08
13	19	96	96	98	20	27	16	18	04
14	24	89	92	85	20	25	15	14	08
15	16	96	95	99	22	28	16	19	00
16	26	80	82	77	21	27	18	16	07
17	17	96	96	97	19	21	14	13	03
18	22	92	94	87	19	22	13	12	07
19	25	57	57	54	14	17	09	10	07
20	23	89	91	85	21	27	17	16	09
21	29	70	70	70	30	41	22	28	09
22	22	85	88	77	09	08	06	-01	08
23	26	83	85	78	21	27	17	16	09
24	23	90	92	86	22	27	17	16	08
25	17	96	96	99	21	26	16	17	02
26	22	90	91	88	22	28	16	18	07
27	24	30	30	21	20	31	20	19	10
28	25	81	83	79	25	36	24	22	09
29	25	90	92	88	22	32	20	19	08
30	18	93	92	97	22	30	19	19	-01
31	17	96	96	98	21	26	16	16	02
32	-19	-06	-05	-04	21	-06	-30	07	-02
33	-12	06	04	14	21	09	-02	14	-23
34	21	93	95	88	13	16	10	06	07
35	20	95	96	95	24	31	17	21	03
36	39	17	18	18	26	67	49	52	06
37		16	17	14	06	24	18	16	20
38	16		99	97	18	21	12	12	04
39	17	99		96	17	21	13	12	07
40	14	97	96		19	25	15	17	01
41	06	18	17	19		66	28	60	05
42	24	21	21	25	66		45	92	10
43	18	12	13	15	28	45		13	-12
44	16	12	12	17	60	92	13		16
45	20	04	07	01	05	10	-12	16	

CORRELATION MATRIX FOR GROUP II

(Elements expressed in hundreds of a unit, off diagonal elements which round to 100 expressed as "XX".)

	1	2	3	4	5	6	7	8	9	10	11	12
1		-49	-23	-48	-51	83	74	-28	06	10	-05	58
2	-49		45	98	98	-20	-09	21	15	11	25	01
3	-23	45		44	44	-03	-01	05	11	09	14	09
4	-48	98	44		92	-20	-09	16	12	09	23	-00
5	-51	98	44	92		-21	-11	25	16	12	26	-01
6	83	-20	-03	-20	-21		96	-24	29	30	24	90
7	74	-09	-01	-09	-11	96		-18	36	40	27	92
8	-28	21	05	16	25	-24	-18		61	57	-09	-17
9	06	15	11	12	16	29	36	61		90	09	43
10	10	11	09	09	12	30	40	57	90		08	40
11	-05	25	14	23	26	24	27	-09	09	08		49
12	58	01	09	-00	-01	90	92	-17	43	40	49	
13	23	08	11	07	09	46	48	34	77	75	18	56
14	70	-12	-00	-14	-12	94	92	-24	30	30	48	94
15	-01	16	11	12	19	21	28	62	95	88	11	36
16	11	27	24	28	23	48	55	05	51	44	32	72
17	11	19	19	20	15	37	46	31	72	66	08	55
18	73	-17	-07	-18	-17	93	92	-23	28	30	45	92
19	10	21	25	23	16	40	44	00	42	30	19	62
20	60	-01	04	-03	-02	88	89	-14	39	41	54	93
21	07	24	31	20	27	49	52	-13	31	24	41	67
22	90	-35	-14	-35	-37	90	81	-27	12	12	24	73
23	54	05	11	04	03	88	88	-18	40	36	56	99
24	54	03	06	01	02	88	90	-16	42	41	52	98
25	04	19	17	16	19	30	37	52	94	83	10	48
26	28	14	19	14	11	64	70	00	57	48	35	85
27	-07	22	14	20	24	26	24	-17	-03	-02	66	43
28	12	43	22	39	44	49	55	-02	31	31	66	68
29	35	32	19	29	32	69	75	-00	46	45	54	82
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